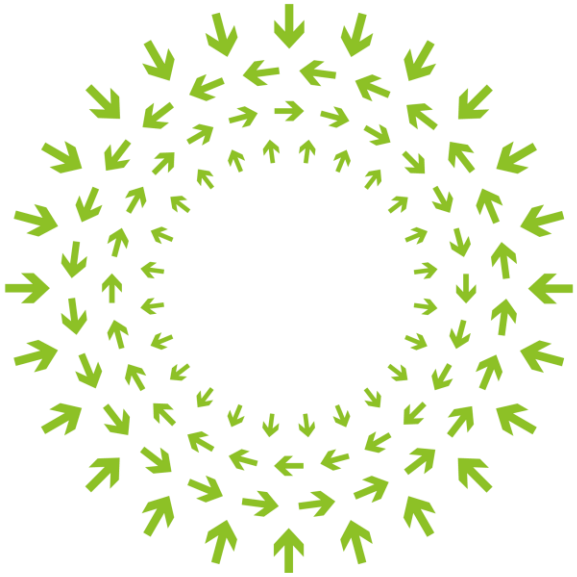

QCT Rackgo X OCP Debug Card with LCD

Product Marketing Specification

<Revision:1.1>

Author:

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Revision History

Revision	Date	Change Summary
1.0	2018/04/23	Product specification revision 1.0 release
1.1	2018/10/15	1. Add the OWFa 1.0 license information 2. Update product name to " QCT Rackgo X OCP Debug Card with LCD" 3. Update description

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1. Overview

The product marketing specification ''QCT Rackgo X OCP Debug Card with LCD'' is to intend to ease the debug effort and time consumed. It already has successfully approved the obvious improvement of the service efficiency with various compatible systems, for instance, ''Tioga Pass'' & ''Yosemite V2''.

Figure 1 QCT Rackgo X OCP Debug Card with LCD

2. High Level System Features

Product Description	
Prodcut Description	Rackgo X OCP Debug Card with LCD
DImension	
Dimension	70.55 mm(L)x48mm(W)x17.1mm(H)
Electrical Interface	
Electrical Interface	1. USB 3.0 Connector with remapped proprietary singal pin, the USB3.0 connector will downgrade to support USB2.0 speed only --USB2.0 --I2C --PRSNT --UART 2. Micro USB 3. USB 2.0 type A connector
User interface	
User interface	--**Power/Reset/UART select button** --**5-way switch**: The 5 way switch allows the user to page up or page down through the debug information on LED panel, for example, post code details/system information/BMC critical SEL/critical sensor/user settings --**Bluetooth on/off switch**: Turn the battery power on/off to enable/disable Bluetooth module
LED Indicator	
LED Indicator	1. MCU Heartbeat --Green blink, Heartbeat for the micro controller on debug card 2. Bluetooth LED --Green, blink at 2Hz if Bluetooth module enabled and no link --Solid Green when Bluetooth connecting or when data transfer 3. Low Battery LED: red LED on when battery lower than 10%; it's off otherwise
LCD panel	
LCD panel	128x64 dots and can display 8 rows and 16 letters on each row

Table 1 High Level System Features

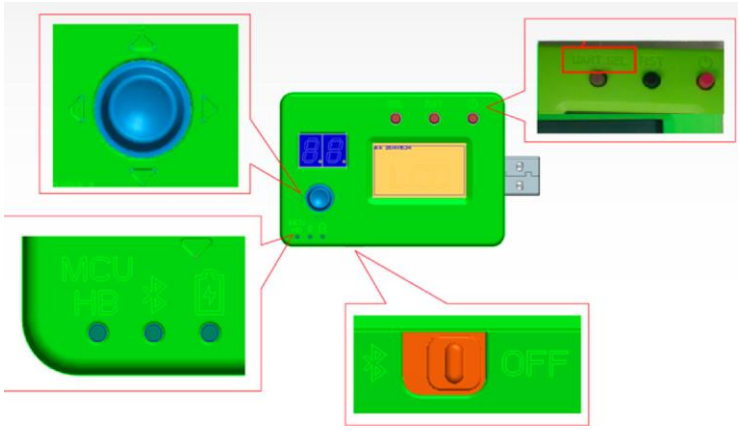


Figure 2 Human Interface

3. Block Diagram

The block diagram describes the high-level functional block diagram of Rackgo X OCP Debug Card with LCD

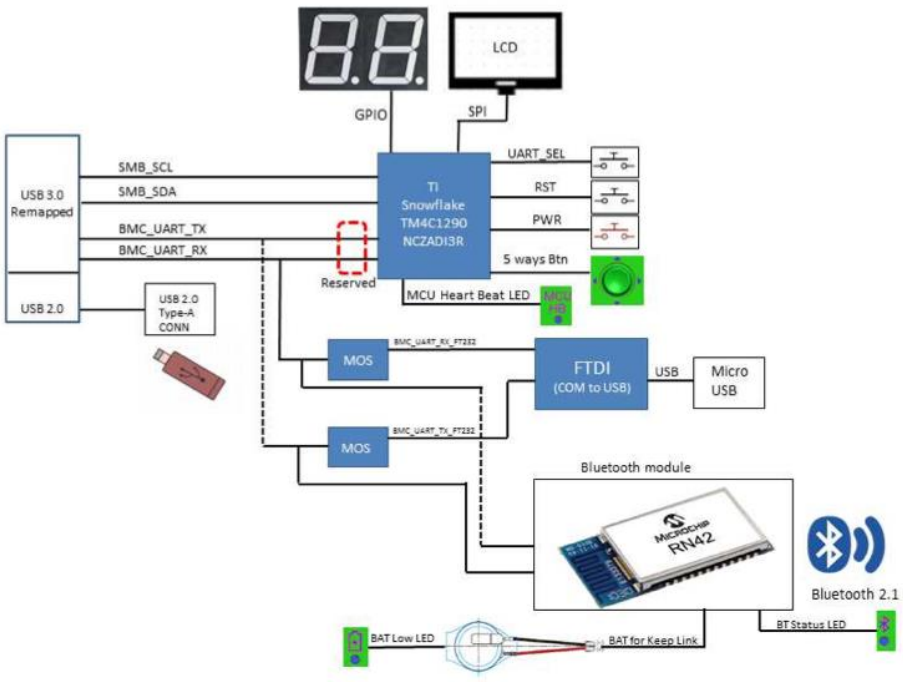


Figure 3 Rackgo X OCP Debug Card with LCD Block Diagram

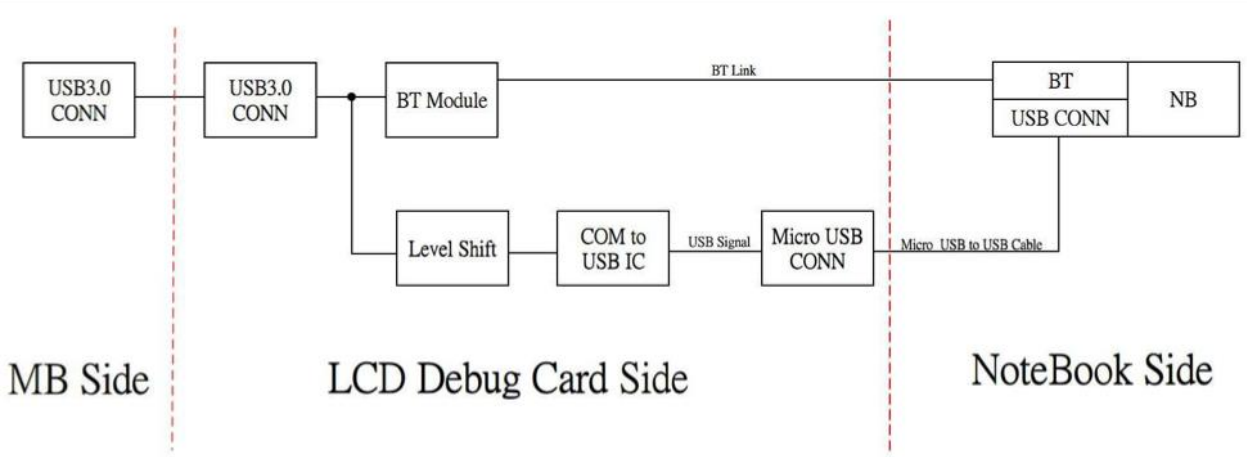


Figure 4 UART Block Diagram

4. Mechanical Dimension

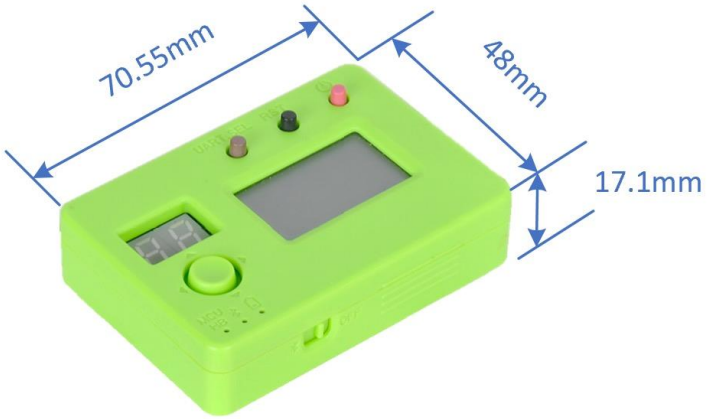
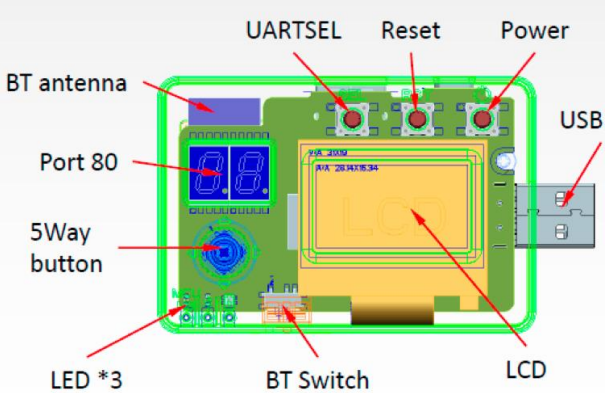


Figure 5 Mechanical Dimension

5. Component Placement

The key part placement of Rackgo X OCP Debug Card with LCD is shown as below:

Top side:



Bottom side:

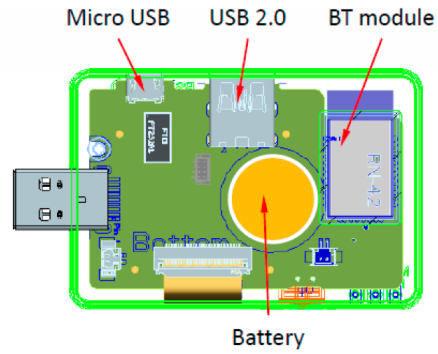
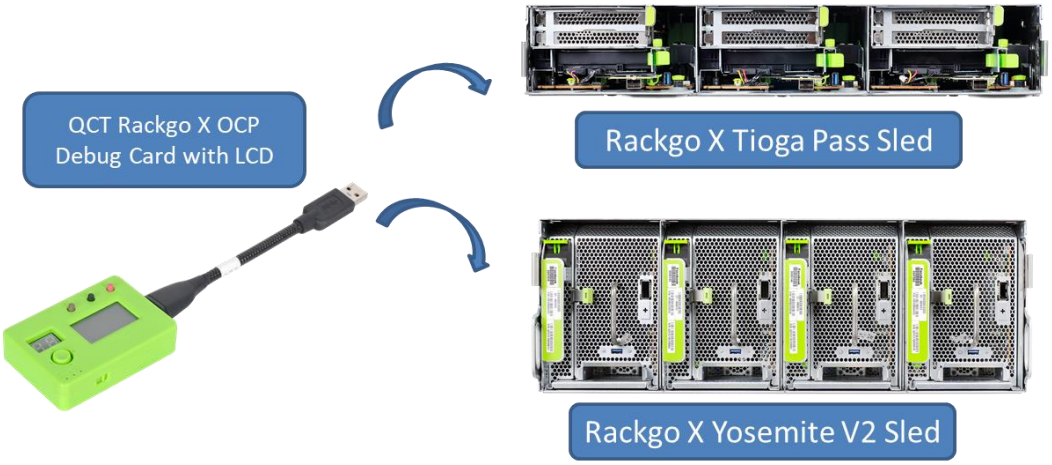


Figure 6 key Part Placement

6. Compatible Components List & User Guide

''QCT Rackgo X OCP Debug Card with LCD'' could be operated with

- Tioga Pass sled
- Yosemite V2 sled



7. OCP Tenets/Principle

- **Efficiency**
  - To Integrate debug utility & debug message into one small box without separated utilities and extra effort
  - Reserve more front-end IO space for more critical IO expansion
- **Scalability**
  - Comply with common debug protocol, like UART, USB
- **Openness**
  - Derive from debug card V1 and with enhanced features
- **Impact**
  - Readable LED & LCD to accelerate the progress of debugging
  - Reserve more I/O space of baseboard by designing with serialized electric interface, like UART/I2C/USB

8. Reference

- Facebook_OCP_Debug_Card_with_LCD_Spec_v1p0